



Automatic Lights for Desk Interior

Written By: Mahesh Venkitachalam



TOOLS:

- [Hot Glue gun & hot glue \(1\)](#)
- [Soldering iron \(1\)](#)



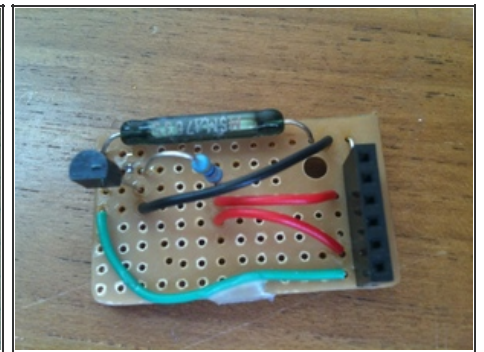
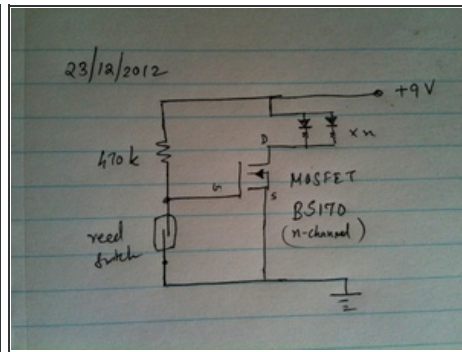
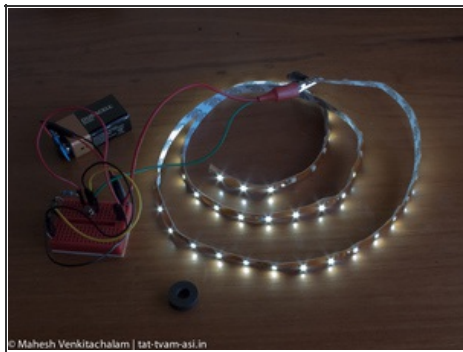
PARTS:

- [MOSFET BS 170 \(1\)](#)
- [Resistors, 470kΩ \(1\)](#)
- [Reed relays \(1\)](#)
- [Wire \(1\)](#)
- [LED strips \(1\)](#)
- [Magnet \(1\)](#)
- [9V battery \(1\)](#)
- [Battery clip 9V \(1\)](#)

SUMMARY

This is a simple circuit that uses a reed switch and a (MOSFET) transistor to turn an LED strip on and off. I hooked this up to my desk so that the lights come on and illuminate the inside of it when I open the door.

Step 1 — Automatic Lights for Desk Interior



- Hook up the reed switch, transistor, resistor, and the LED strip as shown in the circuit diagram. You can first do a prototype on a breadboard.
- Test the circuit using a small magnet.
- Once you are happy with the circuit, solder it on to a small piece of PCB.
- Cut the LED strips into as many pieces as you need (mind that you cut at the gap between sets of LEDs connected in series), and attach them inside your desk drawer or cabinet using their self-adhesive strips.
- You can use a small plastic box (I used one that paper clips are sold in) as an enclosure for your PCB and 9V battery.
- You will need to find an optimal position for the magnet and enclosure so that the LEDs go off when the door is almost closed. Once you are happy with their locations, you can use some hot glue to hold them in position.
- Please check the video for additional information on how I installed the circuit. I first used a BJT 2N2222 to design the circuit, but upon feedback from other users (like **Spritetm**), switched to a MOSFET (BS170) to fix the battery drain problem.

This is a simple project that uses very inexpensive materials. You can use the idea of a magnetic switch for many other projects that require something to happen when a door opens.

Watch the video here:

http://www.youtube.com/watch?v=wFeQDVLr_...

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